

CHAMBETOV, S.Sh

KYDYNOV, M., nauchnyy sotrudnik; BATYRCHAYEV, I.; LOPINA-SHENDRIK, M.D.;
KALBAYEV, A.; IMANAKUNOV, B.; SULAYMANKULOV, K., kand.khim.nauk;
DUYSHENALIYEVA, N.; AKBAYEV, A.; KAZIYEV, K.; GOLOVIN, F.I.;
BAKASOVA, Z.; KOVALENOK, Z.P.; SHELUKHINA, N.P.; BUGUBAYEV, A.B.,
starshiy prepodavatel'; BAYBULATOV, E.B., mladshiy nauchnyy
sotrudnik; FILIPPOV, N.A., mladshiy nauchnyy sotrudnik; MAMBETA-
KUNOV, T., aspirant; IMANKULOV, A., aspirant; TURMAMBETOV, S.,
mladshiy nauchnyy sotrudnik; MUKHAMEDZIYEV, M.M., nauchnyy sotrudnik;
KONURBAYEV, A.O.; PAK, L.V.; RUDAKOV, O.L.; TOKTOSUNOV, A.;
KULAKOVA, R.I.; ASHIRAKHMANOV, Sh., aspirant; ALYSHBAYEV, B.;
SULTANALIYEV, A.; AKHMETOV, K.; POLONOVA, A.P.; NIKITINSKIY, Yu.I.;
SHAMBETOV, S.Sh.; DZHUMBAYEV, B.O., nauchnyy sotrudnik; DRUZHININ,
I.G., red.; ANOKHINA, M.G., tekhn.red.

[Papers by junior scientists of the Academy of Sciences of the
Kirghiz S.S.R.] Trudy molodykh nauchnykh rabotnikov AN Kirgizskoi
SSR. Frunze, 1958. 411 p. (MIRA 12:3)

(Continued on next card)

KYDYNOV, M.---(continued) Card 2.

1. Akademiya nauk Kirgizskoy SSR, Frunze. 2. Institut khimii AN Kirg.SSR (for Kydynov). 3. Kirgizskiy gosudarstvennyy universitet (for Bugubayev). 4. Institut geologii AN Kirg.SSR (for Baybulatov). 5. Institut vodnogo khozyaystva i energetiki AN Kirg.SSR (for Filippov). 6. Otdel fiziki i matematiki AN Kirg.SSR (for Mambetkunov, Imankulov). 7. Institut zoologii i parazitologii AN Kirg.SSR (for Turmambetov). 8. Kirgizskiy meditsinskiy institut (for Mukhamedziyev). 9. Otdel pochvovedeniya AN Kirg.SSR (Ashirakhmanov). 10. Institut botaniki AN Kirg.SSR (for Alyshbayev, Sultanaliyev, Akhmetov, Polonova, Nikitinskiy). 11. Institut istorii AN Kirg.SSR (for Dzhumabayev).
(Science--Collections)

SHAMBORANT, G.G.

"Technological equipment of starch and sirup factories" by
N.A.Buzykin. Reviewed by G.G.Shamborant. Sakh.prom. 34
no.3:75-76 Mr '76.60. (MIRA 13:6)
(Starch industry--Equipment and supplies)
(Buzykin, N.A.)

BAKANOV, Nikolay Alekseyevich; BURMAN, Mark Yefimovich; SOLNTSEVA,
Nina Vasil'yevna; BYCHKOV, B.K., inzh., retsenzent;
USPENSKIY, I.Ye., inzh., retsenzent; SHAMBOURAIT, G.G., spets.
red.; KRUGLOVA, G.I., red.; SOKOLOVA, I.A., tekhn. red.

[Handbook on starch and molasses production] Spravochnik po
krakhmalo-patochnomu proizvodstvu. 2 izd. perer. i dop. Pod
red. M.E.Burmana. Moskva, Pishchepromizdat, 1962. 478 p.
(MIRA 15:11)

(Starch) (Molasses)

KUROCHITSKIY, Cheslav Kazimirovich; SHIPUNOVA, Ninel' Semenovna;
SHAMBORANT, G.G., retsenzent; FUKS, V.K., red.

[Hydrocyclones in the starch and molasses industry] Gidro-
tsiklony v krakhmalo patochnoi promyshlennosti. Moskva, Pi-
shchevaia promyshlennost', 1964. 84 p. (MIRA 18:3)

CONFIDENTIAL, U.S.

Shawcross, J. L. of Billerica, E. F. - "Experience in the VCM circuit in
treating eye infections", Trans. Acad. Ophth. (Wash. Arch.-Ophth. in-4. Stahelberg)
in: Arch. Ophth. (and), Vol. V, 1947, p. 52-62.

SO: H-3 /C, 11 March 50, (Isotopia 'Chemical' Arch. Ophth., No. 3, 1949).

SHAMBURKIN, V., zasluzhenny master sporta

Movable balance for a rifle. Voen.znan. 37 no.7:35 J1 761.
(MIRA 14:6)

(Rifles)

ca 112

PROCESSES AND PROPERTIES INDEX

The formation of antibodies in the subarachnoid cavity. D. A. SHAMBOUROV. *Zhur. expl. Biol. Med.* 13, 104-111(1929).—When rabbits are immunized by way of the subarachnoid space agglutinins and hemolysins accumulate both in the cerebrospinal fluid and in the blood but in the latter 5-10 times as much. These antibodies remain in the fluid for a long time after immunization, even for 2 months. The concn. diminishes gradually but in a parallel manner to the decrease in the blood. When immunization is made either by the subcutaneous or intraperitoneal method the antibodies fail to appear in the cerebrospinal fluid even though they may attain a high titer in the blood or may occur in a concn. of 1/400-1/800 of that of the blood, if the normal permeability of the nervous barrier is injured through the introduction of other noxious agents into the spinal canal. In this case the antibodies rapidly disappear from the fluid. Subcutaneous or intraperitoneal immunization which does not induce the cells of the subarachnoid space to form antibodies, nevertheless so affects them that they now respond very energetically even to a single injection of antigen. The antibodies found in the cerebrospinal fluid in the subarachnoid immunization are formed directly by the elements of the subarachnoid cavity, while the antigen which gains entrance to the blood and lymph from the spinal fluid causes the formation of antibodies present in the blood. The use of this method in therapeutics is suggested. S. MORGULIS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

SHAMONOV, D. A.

Shamonov, D. A. "Discernment of stimulation and aggravation of lumbar and thoracic ailments," Fredy Chernin. ed. Klinich. Golfnitsy, Kherrino (Moscow Golant,, 1944, p. 64-95

So: W-3400, 12 March 53, (L topis 'Churnal 'nykh Senty, No. 13, 1949)

SHANLEY, L. A.

"Review of Prof. E. M. Sizel's Book, 'Nervous Diseases'," Klin. Med., 27, No. 11, 1949.
Prof. -clg/9-.

SHAMBUROV, D.A.

[Sciatica] Ishias. 2-e izd. Moskva, Medgiz, 1954. 220 p. (MLBA 8:1 D)

SHAMBUROV, Dmitriy Afanas'yevich.

[Cerebrospinal fluid] Spinnomozgovaya zhidkost'. Moskva, Medgiz,
1954. 279 p. (MLRA 8:4)
(Cerebrospinal fluid)

SHAMBUROV, D.A., prof.

Prevention of radiculitis. Zdorov'e 5 no.1:20-22 Ja '59
(MIRA 11:12)

(NERVES, SPINAL--DISEASES)

SHAMBUROV, D.A. (Moskva)

Status dysrapicus and lumbosacral radiculitis. Zhur.nev. i psikh.
59 no.6:697-705 '59. (MIRA 13:1)

1. Nervnaya klinika TSentral'noy klinicheskoy bol'nitsy Ministerstva
putey soobshcheniya, Moskva.

(ABNORMALITIES,

dysraphia causing lumbosacral radiculitis (Rus))

(NERVES, SPINAL, dis.

lumbosacral radiculitis caused by dysraphia (Rus))

SHAMBUROV, Dmitriy Afanas'yevich; GOTOVTSEV, P.I., red.; SENCHILO, K.K.,
tekhn. red.

[Syringomyelia] Siringomieliia. Moskva, Medgiz, 1961. 218 p.
(MIRA 15:1)
(Syringomyelia)

DAVIDENKOVA-KUL'KOVA, Ye.F., prof.; MIKHEYEV, V.V., prof.; MARKOV, D.A., prof., akademik; PANOV, A.G., prof.; SAKHAROV, Yu.N., dotsent; FUTER, D.S., prof.; KHONDKARIAN, O.A., prof.; SHAMBUROV, D.A., prof.; DAVIDENKOV, S.N., prof., otv. red.; BOGOLEPOV, N.K., prof., zam. otv. red.; OSTROVERKHOV, G.Ye., glav. red.; GRASHCHENKOV, N.I., prof., red.; KORNYANSKIY, G.P., prof., red.; RAZDOL'SKIY, I.Ya., prof., red.; FILIMONOV, I.N., prof., red.; BARAKHINA, I.L., tekhn. red.

[Multivolume manual on neurology]Mnogotomnoe rukovodstvo po nevrologii. Moskva, Medgiz. Vol.3. Book 1[Infectious and topic diseases of the nervous system]Infektsionnye i toksicheskie bolezni nervnoi sistemy. 1962. 524 p. (MIRA 15:11)

1. Akademiya nauk Belorusskoy SSR (for Markov). 2. Deystvitel'-nyy chlen Akademii meditsinskikh nauk SSSR(for Davidenkov, Grashchenkov, Filimonov). 3. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for RAZdol'skiy).

(NERVOUS SYSTEM—DISEASES)

SHAMBUROV, I.

Polishing small articles. Prom. koop. 12 no.2:12 F '58. (MIRA 11:1)

1. Master arteli "Spayka," Moskva.
(Grinding and polishing)

SHAMBUROV, V.A.;VEDENEYEVA, N.Ye.

Comparative microscope-spectrophotometer. Zav.lab.21 no.9:
1127-1131 '55 (MLRA 9:1)

1.Institut kristallografii Akademii nauk SSSR.
(Spectrophotometer)

USSR/Optics - Potometry. Colorimetry

K-10

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 13194

Author : Shamburov, V.A., Grechushnikov, V.N.

Inst : -

Title : Wedge Diaphragms for Photometers.

Orig Pub : Izmerit. tekhnika, 1956, No 3, 52-56

Abstract : Description of wedge diaphragms for photometers, which make it possible to obtain a uniform scale of the values of the ratios of the areas of the entrance pupils S_0/S in two branches of the photometric system, as well as of $\log S_0/S$ or S/S_0 . The diaphragms comprise a combination of two overlapping plates (or disks) with openings. One disk is movable, the other is not. By choosing the forms of the holes it is possible to obtain the required variation of the area of the pupil with the coordinate that characterizes the mutual shift of the plates (disks). The formulas necessary for the design of diaphragms of this type are given.

Card 1/1

SHAMBUROV, V.A.

A fall-type coordinate-reproducing device. Prib.1 tekhn.eksp.no.3:
93-96 N-D '56. (MLRA 10:2)

1. Institut kristallografii AN SSSR.
(Photomechanical processes) (Drawing instruments)

SHAMBUROV, V.A.

21
Investigation of the luminescence of petroleum and bitumen with a microscope-spectrophotometer comparator. S. P. Maksimov, V. A. Shamburov, and R. G. Pankina. *Neftyanoe Khoz.* 34, No. 8, 58-60(1956).—Luminescence was studied with an app. designed by S. and Vedeneva (C.A. 50, 9156c) which compares color and intensity of the luminescence. Calcite was used as a standard because its luminescence is permanent. Naphthalene and paraffin wax samples were obtained from the crude oils by capillary extr. or by solvent evapn. The luminescence of solid paraffin wax was found to vary considerable because of the presence of impurities; luminescence of naphthalene is very complex, and interpretation of the results obtained is very ambiguous. W. M. Steinberg

SHAMBURG, V.A.

Dividing mechanisms based on the crystallographic principle of
close packing of geometrically identical bodies. Kristallografiia
2 no. 1:172-178 '57. (MLRA 10:7)

1. Institut Kristallografiia Akademii nauk SSSR.
(Dividing engines)

SHAMBUROV, V. A.

Optical indicatrix and surfaces of birefringence. Kristallografiia 7 no.3:379-388 My-Je '62. (MIRA 16:1)

1. Institut kristallografi AN SSSR.

(Crystal optics) (Refraction, Double)

SHAMBUROV, V.A.

Theoretical foundations of the experimental determination of the
increments of polarization constants in crystals. Kristallografiia
7 no.4:593-599 J1-Ag '62. (MIRA 15:11)

1. Institut kristallografii AN SSSR.
(Polarization (Electricity)) (Crystal optics)

SHAMBUROV, V.A.

Theoretical bases of the experimental determination of the electrooptical constants of crystals. Kristallografiia 7 no.5:730-734 S-0 '62.
(MIKA 15:12)

1. Institut kristallografii AN SSSR.
(Crystallography, Mathematical)

SHAMBUROV V.A.

45676

S/070/63/008/001/008/024;
E132/E460

24,700.

AUTHORS: Vlokh, O.G., Zheludev, I.S., Shamburov, V.A.
TITLE: The electro-optical effect in crystals of pentaerythritol $C(CH_2OH)_4$

PERIODICAL: Kristallografiya, v.8, no.1, 1963, 51-56

TEXT: For pentaerythritol, which belongs to the crystal class $\bar{4}$, crystals showing the growth pyramids 10 $\bar{1}$ appear to have a two-fold axis. [Abstracter's note: The authors state that the crystals appear biaxial optically. This does not appear to be correct as this system must be uniaxial, but it may mean that the ellipsoid of revolution which represents the refractive indices requires two parameters to describe it and has two different axes.] The optical indicatrix is described by the equation:

$$(a_0^2 + r_{12}E_y)x^2 + (b_0^2 + r_{22}E_y)y^2 + (c_0^2 + r_{32}E_y)z^2 + 2r_{52}E_yxz = 1$$

when an electric field E_y is applied along the y-axis. This y-axis is the fourfold inversion axis for the crystal as a whole. a_0 , b_0 and c_0 are the reciprocals of the principal Card 1/3

S/070/63/008/001/008/024
E132/E460

The electro-optical ...

refractive indices; r_{ij} are the electro-optical coefficients, 8 being non-zero for this cut. It follows that when an electric field is applied the indicatrix is deformed and rotates in the XZ plane through an angle θ_2 . This y-cut crystal was mounted between crossed Nicols and a beam of monochromatic light was passed through the system into a photomultiplier. The plate was adjusted to extinction and a high voltage was applied to the electrodes, the increase in transmitted light being measured. The increase resulted from the rotation of the indicatrix which could reach 22.5° if a field of 220 kV/cm were applied. The material has a high melting point (257°C) and behaves as a linear dielectric with a specific resistance of 10^{15} to 10^{12} ohm cm over the range 30 to 130°C in the absence of surface conductivity. The crystals are not hygroscopic and have a perfect 001 cleavage which corresponds to the y-cut used if it is reckoned that the growth pyramids of the form $10\bar{1}$ give crystals of the class 2. The moduli were found to be

$$r_{52} = (4.38 \pm 0.13) \times 10^{-8} \text{ esu} \quad \text{and} \quad r_{32} - r_{12} = (2.09 \pm 0.13) \times 10^{-8} \text{ esu.}$$

Card 2/3

The electro-optical ...

S/070/63/008/001/008/024
E132/E460

The rotation of the indicatrix is about 20 times that produced by the same field in ammonium dihydrogen phosphate. The latter (ADP) has, however, a much greater electro-optical effect when the field is in the Z-direction. There are 3 figures.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

SUBMITTED: June 26, 1962

Card 3/3

L 12010-63 EWP(j)/EPF(z)/EWT(1)/EWT(m)/BDS AFPTC/ASD/ESD-1
 0-14721-4 GG/RM/WW/JW/IJP(C)
 ACCESSION NR: AP3000791 S/0070/63/C08/C03/0482/0483

AUTHOR: Belyayev, L. M.; Vlokh, O. G.; Gil'varg, A. B.; Dobrzanskiy, G. F.;
 Melasov, G. B.; Shamburov, V. A.; Shuvalov, L. A.

TITLE: Linear electrooptical effect in crystals of hexamethylenetetramine
 (urotropin) C sub 6 H sub 12 N sub 4

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 492-494

TOPIC TAGS: hexamethylenetetramine, urotropin, electrooptical effect, ZnS, CuCl,
 electrooptical constant

ABSTRACT: This study was undertaken because the only two commonly employed crystals with sufficient electrooptical effect for practical use (ZnS and CuCl) are generally of unsatisfactory quality or are difficult to obtain. The authors obtained hexamethylenetetramine by sublimation in a vacuum and found it to form well-developed rhombic dodecahedrons. In polarized light the specimens exhibit a dark cross in the middle of the field and a black border about the center with four light areas in the centers of the four quadrants. When an electric field was impressed at right angles to the direction of light propagation, voltages up to 10 kv, the light patches became dark and the dark areas lightened. This effect proved to be linear, the change depending on the applied voltage. Because of this

Card 1/2

L 12010-63

ACCESSION NR: AP3C00791

linear effect it was impossible to determine precisely the electrooptical effect. A preliminary approximation was made, however, by measuring total transmission of the crystal was between crossed polarizing plates and by comparing this with the voltage applied. Similar measurements were made through the center of the dark cross. Results show hexamethylenetetramine to be as satisfactory as previously used material. It also has two other pass bands in the infrared region of the spectrum. Orig. art. has: 2 figures.

ASSOCIATION: Institut kristallografi AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 02Feb63

DATE ACQ: 21Jun63

ENCL: 001

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4024730

S/0109/64/009/003/0505/0513

AUTHOR: Shamburov, V. A.; Vlokh, O. G.

TITLE: Electrooptical effect in crystals and its application

SOURCE: Radiotekhnika i elektronika, v. 9, no. 3, 1964, 505-513

TOPIC TAGS: electrooptical effect, crystal, electrooptical crystal, SHF light modulation

ABSTRACT: A review based almost exclusively on Western sources is presented. A definition of the electrooptical effect in terms of variation of the crystal optical indicatrix is formulated. Four types of optical systems used for observation of the effect, light modulation and chopping are briefly described. Initial orientation of the crystal plate in the modulator optical system is discussed, as well as methods of applying the electric field to the crystal. Fourteen known electro-optical crystals are tabulated along with their electrooptical coefficients and

Card 1/2

ACCESSION NR: AP4024730

voltages required for $\lambda/2$ paths difference at $\lambda = 5,461 \text{ \AA}$ and 20C. Of these, the crystals of $\text{NH}_4\text{H}_2\text{PO}_4$, KH_2PO_4 , BaTiO_3 , and quartz are used for SHF modulation of light. Recommendations for further research on electrooptical crystals are given. Orig. art. has: 3 figures, 2 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 26Jan63

DATE ACQ: 10Apr64

ENCL: 00

SUB CODE: EC, GP

NO REF SOV: 009

OTHER: 045

Card 2/2

L 8887-65 EEO-2/EWA(k)/EWT(d)/EWT(1)/EEG(k)-2/K/EEG-4/T/EEG(b)-2/EWP(k)/
EED-2/EWA(m)-2 Pm-4/Pc-4/Pac-4/Pf-4/Pi-4/IJP(c)/AS(mp)-2/RAEM(a)/
RAEM(t)/ESD(gs) WG/JHB
ACCESSION NR: AP4046044 S/0070/64/009/005/0672/0680

AUTHOR: Shamburov, V. A.

TITLE: Linear electrooptical effect in cubic crystals (Phenomeno-
logical theory) ^B

SOURCE: Kristallografiya, v. 9, no. 5, 1964, 672-680

TOPIC TAGS: electro optical effect, cubic crystal, atomic crystal
structure, light modulation

ABSTRACT: The dependence of the form and directions of the principal axes of the optical indicatrix on the magnitude and direction of the electric field acting on the cubic crystal is investigated. The particular cases when the field is directed along the $\langle 100 \rangle$, $\langle 110 \rangle$, and $\langle 111 \rangle$ axes are considered, and a general relation is established in analytic form for an arbitrary direction of the electric field in the crystal. An illustrative graphic representation

Card 1/3

L 8887-65

ACCESSION NR: AP4046044

2

of the character of the dependence of the form and directions of the principal axes of the optical indicatrix is presented for the first time in the case when electric field vector runs through all the possible directions in the crystal. This representation consists of stereographic projections of lines of constant form of the optical indicatrix of the cubic crystal and stereographic projections with poles on different axes of the crystal. It is claimed that the solution can be helpful in the development of a microtheory of the electro-optical effect, in which account is taken not only of the atomic structure of the crystal but also of the character of the phenomenological behavior. It can also be helpful in a rational choice of oblique cuts for practical utilization of cubic crystals for light modulation and other purposes. "The author thanks V. Z. Obruchnikova for help in preparing the article and for many of the calculations." Orig. art. has: 8 figures and 13 formulas.

ASSOCIATION: Institut kristallografi AN SSSR (Institute of Crys-

Card 2/3

L 8887-65

ACCESSION NR: AP4046044

tallography AN SSSR)

SUBMITTED: 14May63

SUB CODE: OP, SS

NR REF SOV: 002

ENCL: 00

OTHER: 006

Card 3/3

L 55974-65 EWA(k)/FBD/EWG(r)/EWT(1)/EEG(k)-2/EEG(t)/T/EEG(b)-2/ENP(k)/EWA(L)/
EWA(N)-2 PE-4/Pa-4/PC-4/Pf-4/Peb/Pi-4/Pl-4 SCTB/IJP(c) WG

ACCESSION NR: AP5015489

UR/0286/65/000/008/0024/0024
535.314

AUTHOR: Shamburov, V. A.

TITLE: Device for deflecting light beams. Class 21, No. 170074

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 24

TOPIC TAGS: light beam deflection, laser component

ABSTRACT: The proposed device is based on the electro-optical effect. For increased speed of response, it is designed in the form of a rectangular parallelepiped composed of two or more triangular prisms made of electro-optical crystals. Light falls on the end plane of the parallelepiped, and electrodes are deposited on the sides. When used as a light valve in a laser, the device is mounted between the external mirrors, which are positioned at an angle to each other. [DW]

ASSOCIATION: none

SUBMITTED: 14Jan64

ENCL: 00

SUB CODE: EC, OP

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4035

Card 1/1

SHAMBUROV, V.A.

Rotation of the plane of polarization of light by crystals under
the action of an electric field. Dokl. AN SSSR 162 no.1:60-63 My
'65. (MIRA 18:5)

1. Institut kristallografii AN SSSR. Submitted June 8, 1964.

L 26057-65 EWT(1)/EEC(k)-2/EEC(t)/EEC(b)-2 P1-4 IJP(c)

S/0020/65/160/001/0073/0076

ACCESSION NR: AP5004194

AUTHOR: Shamburov, V. A.

TITLE: Rotation of polarization plane of light by crystals in an electric field

SOURCE: AN SSSR. Doklady, v. 160, no. 1, 1965, 73-76

TOPIC TAGS: polarization plane rotation, electrooptical effect, ADP crystal, double refraction, birefringence, crystallography, Faraday effect

ABSTRACT: It was established analytically that the rotation phenomenon is characteristic for all crystals subject to the electrooptical effect which have cross-sectional ellipses of the optical indicatrix capable of rotating in their planes without shape changes when exposed to a suitably directed electric field. The necessary condition is that the difference between beam paths in the crystal along the normal to the cross section of the indicatrix is equal to one or an odd number of half-waves in the absence of a field. It was also established that in all cases 1) when in a homogeneous transparent bounded medium with naturally or artificially created birefringence along some direction, the difference between the beam paths is equal to one or an odd number of half-waves, and 2) when, under the effect of the electric or magnetic field or mechanical stress, the elliptical cross section of the

Card 1/2

L 26057-65

ACCESSION NR: AP5004194

optical indicatrix normal to a given light direction turns without changing its shape, a "clean" rotation of the polarization plane of the light propagating in the given direction will take place. If the deflection of the ellipse of the indicatrix cross section is accompanied by a small increase in path difference in relation to the half-wave, the rotation will then be "unclean" since it will be accompanied by a small ellipticity of oscillations, which will increase with the rise of the deflection angle of the polarization plane. Orig. art. has: 1 figure and 1 formula. [JA]

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography, Academy of Sciences, SSSR)

SUBMITTED: 13Apr64

ENCL: 00

SUB CODE: SS,EM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3186

Card 2/2

L 1999-66 ENT(1)/EPA(s)-2/ENT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/WW/
 JG/GG
 UR/0070/65/010/005/0658/0662
 548.0:535.323

ACCESSION NR: AP5024550

AUTHOR: Shamburov, V. A.; Kucherova, I. V. 44, 75

TITLE: Anomalous birefringence and the nonuniformity of this type of refraction in KH_2PO_4 crystals

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 658-662

TOPIC TAGS: crystallography, double refraction, light shutter, potassium compound, crystal optic property, optic crystal, KDP crystal

ABSTRACT: An effective method is proposed for studying the distribution of optical nonuniformity in Z-cuts of KDP crystals. Both the quantitative and qualitative characteristics of nonuniformity in the crystals were studied by combining two experimental methods: observation and photography of the interference pattern of the crystal between crossed polaroid filters in a wide parallel beam of rays, and probing of the crystal with a narrow (1 mm) parallel beam of rays at various points on the cross section with photoelectric registration of the light transmission. This method gives a general picture of the distribution of optical nonuniformity through the cross section of a crystal and can be used for selecting the best part of this cross section to be used in making a light shutter. Photographs of the inter-

Card 1/3

L 1999-66

ACCESSION NR: AP5024550

13
ference patterns of two typical crystal specimens are given. The growth pyramids in optically nonuniform crystals show up clearly when the crossed polarizers are turned 45° with respect to the X and Y crystal axes. When the Z planes of the crystals are perpendicular to the direction of the light beam, these pyramids are nearly uniformly illuminated and gray. Curves are given showing the transmission of the crystal as a function of angle of inclination about the Y axis for vertical and horizontal growth pyramids in a nonuniform crystal. These curves are compared with the theoretical transmission curve for a uniform crystal. An anomalous optical biaxiality is found in the growth pyramids of the crystals, the optical axes in the vertical pyramids being in the XZ plane, while those in the horizontal pyramids are in the XZ plane at angles of 25' and 30' with one another, with the Z axis as a common bisector along which the average values of anomalous double refraction are $0.1 \cdot 10^{-5}$ and $0.15 \cdot 10^{-5}$, respectively. This anomalous birefringence is apparently due to internal stresses. "The authors are grateful to I. S. Zheludev and V. L. Indenbom for discussion of the work and for many valuable comments, and also to S. V. Rozhkov and coworkers for furnishing the crystals grown for this study." Orig. art. has 3 figures. 44, 55 [14]

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR) 44, 55

Card 2/3

L 1999-66

ACCESSION NR: AP5024550

SUBMITTED: 12Oct64

NO REF SOV: 002

ENCL: 00

OTHER: 002

SUB CODE: SS, OP

ATD PRESS: 4115

Card. 3/3

L 4199-66 EWT(1)/EPF(c)/T IJP(c) GG/WW

ACCESSION NR: AP5013441

UR/0020/65/162/001/0060/0063

AUTHOR: Shamburov, V. A. 49.85

TITLE: Rotation of the plane of polarization of light in crystals under an applied electrical field 21.44.55

SOURCE: AN SSSR. Doklady, v. 162, no. 1, 1965, 60-63

TOPIC TAGS: light polarization, crystal optic property, electric field

ABSTRACT: The rotation of the plane of polarization was observed in tetragonal crystals of $\bar{4}m$ symmetry (type ADP). Thin slices of the crystals (2 to 9 mm thick), cut perpendicularly to the z -axis, were put between crossed polarizers and photographed under conoscopic illumination. The polarizers were either parallel or at 45° to the x and y axes of the crystals. Transparent electrodes were used to apply an electrical field in the direction of the z -axis. In examining the conoscopic photographs attention was confined to the dark points on lines corresponding to the positions of the x and y axes of the crystals. These dark points correspond to directions of propagation along which the path difference between the light rays is an odd number of half wavelengths. On application of an electric field the dark points became brighter in proportion to the applied field strength. For moderate

Card 1/3

L 4199-66

ACCESSION NR: AP5013441

electric fields ($E = 10 \text{ kv/cm}$) where the additional path difference did not exceed 0.1λ , the light intensity at the above points could again be reduced to zero by turning the analyzer through angles up to 11° . This could not be done at higher field intensities because of the increasing elliptical polarization of the light caused by rotation of the plane of polarization. For further study of the above effects specimens were made of two slices of KDP crystal joined so that their z -axes pointed in the same direction and the x -axis of one coincided with the y -axis of the other. A number of photographs are given showing the conoscopic pattern first without the applied field, then with gradually increasing electric field. A corresponding pattern is obtained by turning the analyzer through such an angle as to again extinguish the first dark points along the y -axis (the dark points along the x -axis are simultaneously brightened). The observed patterns are explained as follows: the effect of the electric field is to turn the optical indicatrix for the first slice through some angle χ , and the plane of polarization through an angle 2χ . In the next slice the indicatrix is again turned through an angle χ but in the opposite direction, and the plane of polarization is turned through an angle 6χ in the same direction, giving a net rotation of 4χ . There is a brief discussion of the behavior of n slices of crystals of the ADP type (with z axes in the same direc-

Card 2/3

L 4199-66
ACCESSION NR: AP5013441

tion and alternate x and y axes parallel). Orig. arg. has: 4 figures. 3

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography, Academy of Sciences, SSSR)

SUBMITTED: 13Apr64

ENCL: 00

SUB CODE: SS, OP

NO REF SOV: 000

OTHER: 000

Card 3/3 DP

L 7988-66 EWT(d)/EWT(1)/EEC(k)-2
 ACC NR: AP5026542 SOURCE CODE: UR/0286/65/000/019/0085/0085
 44,55 44,55 44,55
 AUTHORS: Vlokh, O. G.; Zheludev, I. S.; Shamburov, V. A. 46
 ORG: none
 TITLE: Electrooptical modulator. Class 42, No. 175272
 SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 85
 TOPIC TAGS: 21, 44, 55 electrooptic effect, electric field
 ABSTRACT: This Author Certificate describes an electrooptical modulator consisting of crossed polarizers between which is situated a crystal in an electric field. The direction of the electric field is parallel to the direction of light and the axis of symmetry. To eliminate the treatment of the crystal surface and the influence of temperature and moisture of the surrounding medium on its performance and also to eliminate turning the optical axis through an angle of 22.5° under nonresonance condition, use is made of a pentaerythritol crystal.
 SUB CODE: OP/ SUBM DATE: 26Jan63
 Card 1/1 CC UDC: 621.376.9

SHAMBUROV, V.A.

"Synthesis and Precision Investigation of Plane Hinged Pantographs by the Method of Complex Variables." Thesis for degree of Cand Technical Sci. Sub 19, May 50, Inst. of Machine Studies, Acad. Science, USSR

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950, From Vechernyaya Moskva, Jan-Dec 1950.

SHAMBUROV, V.A.

Using the method of complex variables in the theory of precision
of plane mechanisms having lower pairs. Trudy Inst. mash. Sem. po
toch. v mash. i prib. no.10:28-53 '57. (MIRA 11:1)
(Mechanics, Analytic)

SOV/124-58-10-10825

Translation from: Referativnyy zhurnal Mekhanika, 1958, Nr 10, p16 (USSR)

AUTHOR: Shamburov V A

TITLE: New Design synthesis Method for a Pantograph and Other Scale transforming Mechanisms (Novyy metod sinteza pantografov i drugikh transformiruyushchikh mekhanizmov)

PERIODICAL: Tr. Seminara po teorii mashin i mekhanizmov. In-t mashinoved. AN SSSR 1957. Vol 17, Nr 67, pp 5-21

ABSTRACT: General principles are formulated and an analytical design synthesis theory is developed for plane scale-transforming mechanisms with closed pairs without idler links of such linkages which reduce into a mechanism possessing two degrees of free dom when one of the links is fixed rigidly. The synthesis of pantographs is examined and a general solution of the synthesis problem for general types of plane, hinged, seven-link pantographs is given. Bibliography: 19 references.

Card 1/1

V N Geminov

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>SHAMEKA, I. T.</p> <p>104</p> <p>New salt domes on the territory of the Ukrainian S. S. R. I. T. Shameka. <i>J. Geol., Acad. Sci. Ukrain. S. S. R.</i> 5, No. 4, 200-1 (1938).—The salt solns. contain 1.58 g. Na⁺, 0.037 Ca⁺⁺, 0.0197 Mg⁺⁺, 2.37 Cl⁻, 0.038 Br⁻, 0.00023 I⁻, 0.009 SO₄⁼⁼ and 0.214 HCO₃⁻ per l. <i>Naphtha de-</i> <i>posits in the Izyum region.</i> V. Portir'ev. <i>Ibid</i> 202. F. H. Rathmann</p>																																																			
<p>ASACSLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

3021. I. I.

3021. Novoye Isosirosheniye krasnoykh Alin i Poluchiyu. Grad' niyevsk. Pekhnel.
En-Ta Slikatov, T. II, 1949, c. 41-45.

SO: Letopis' Khurnal'nykh Statey, Vol. 50, Moskva, 1949

ROKOS, I.D.; SHAMEKO, N.I.

Certain methods of investigation of the dynamics of processes
taking place in flow reactors. Ukr. khim. zhur. 30 no.4:
353-359 '64. (MIRA 17:6)

1. Institut khimii polimerov i monomerov AN UkrSSR.

SHAMENKO, A.G.

Some structural defects in automobile cranes and compressors. Mekh.
stroi. 13 no. 12:22-23 D'56. (MIRA 10:1)
(Cranes, derricks, etc) (Compressors)

SHAMENKOV, V. I.

USSR/Electricity - Electric drives

Card 1/1 : Pub. 103 - 3/29

Authors : Verkholat, M. E., and Shamenkov, V. I.

Title : Diagram of electrical power drive of heavy machines

Periodical : Stan. i instr. 9, 10-11, Sep 1954

Abstract : The plan of an electrical drive having a DC-motor with an ultra-wide range of speed changes and an asynchronous generator for speed control is described. The principal wiring diagram of such an electrical drive is shown. Four USSR references (1949-1953). Graphs; drawings.

Institution : ...

Submitted : ...

SHAMENKOVA, Lyudmila

The burden of mistrust loses weight. Rabotnitsa 37 no.9:
22-23 S '59. (MIRA 13:1)
(Russia--Social conditions)

SHAMENKOVA, Lyudmila

People whose travelling expenses are paid. Rabotnitsa 37 no.11:8

N '59.

(MIRA 13:2)

(Laletino (Krasnoyarsk (Territory)--Women--Employment))

717-
5017(1)-10-11-1/75

AUTHORS: Chernyakin, N. M., Arbutov, Yu., Kolodov, M. N., Shumen-
chikov, G. A., Ononienko, V. V., Konnova, Yu. I.

TITLE: Identification in the Field of Tetraacylenes. VI. Carboxy-
amidation of Dimedone With Isocyanates

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 2, pp. 542-545
(USSR)

ABSTRACT: Carboxyamidation of dimedone with carbonic acid derivatives
was done by one of the following variants. There are 5
references, 3 Soviet, 1 German, 1 U.S. The U.S. reference
is: R. L. Frank, H. K. Hall, J. Am. Chem. Soc., 72, 1645
(1950).

ASSOCIATION: Institute of Organic Chemistry, Academy of Sciences, USSR
(Institut organicheskoy khimii Akademii nauk SSSR)

DATE FORW: February 25, 1961
717-1/3

Application in the Field of Tetraacylene :
 I. Carboxymethylation of Dimedone With Iso-
 cyanates

77885

SOV/79-30-2-36/18

Some Properties of Obtained Products

No	Starting material	Obtained product	Yield in %	in	bp/mm pr	n _D ²⁰
1	No-enolate of dimedone (I) + dry ether + chloroformic acid	Ia	76		120- 122/14	1.4784
2	I + phosgene	3-chloro-5,5-dime- -thylcyclohex-2-en- -1-one	79		78/7	1.4953
3	I + phenyl isocyanate + + dimethylformamide	IIIb	75		mp 92- 93	
4	I + carbethoxy cyanate	IIIc	94		mp 65- 66	
5	IIIc + NH ₄ OH + CH ₃ OH	IV	97			

Card 3/3

POLYAKOV, A., Geroy Sotsialisticheskogo Truda, komandir podrazdeleniya
polyarnoy aviatsii; SHAMES, A., shтурман eskadril'i

Our objections to engineer. Grazhd. av. 20 no. 5:23 My '63.
(MIRA 16:7)

(Airplanes - Fuel)

SHAMES, Aleksandr, shturman 1-go klassa.

Across the tropics to glaciers. Grazhd. av. 22 no. 11:26-28
N '65. (MIRA 18:12)

SHAMES, Aleksandr, shturman 1-go klassa

Across the tropics to glaciers. Grazhd. av. 22 no.12:20-23
D '65. (MIRA 18:12)

ARKHIPCHENKO, A.S.; NAZAROV, V.I.; SHAMES, D.Z.

Geologic and economic oil and gas prospecting indices for the
West Siberian Plain. Geol. nefti i gaza 7 no.7:13-17 J1 '63.
(MIRA 16:7)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy
geologorazvedochnyy institut.

(West Siberian Plain—Petroleum geology)
(West Siberian Plain—Gas, Natural—Geology)

GRACHEV, N.I.; ANSIMOV, V.V.; BOYARSKIKH, G.K.; VLESHECHAKO, I.A.; MIN'KO, V.A.;
KIRONOV, Yu.K.; SILENOV, V.G.; SHAMES, D.Z.; IONINA, I.N., vedushchiy
red; CHOCHIA, N.G., red.

[Geological and economic efficiency in prospecting for oil and gas
in the West Siberian Plain.] Geologo-ekonomicheskaya effektivnost'
geologoposkovykh i razvedochnykh rabot na neft' i gaz v Zapadno-
Sibirskoi nizmennosti. Leningrad, Gostoptekhizdat, 1963. 199 p.
map (insert. Leningrad. Vsesoiuznyi i neftianoi nauchno-issledovatel'
skii geologorazvedochnyi institut. Trudy, no.206). (MIRA 17:10)

PETRYAKINA, Ye.I.; EMINOV, Ye.A.; SHAMES, F.Ya.; STEPANOVA, N.K.

Lubricant performance of spindle and machine oils from eastern
sulfur-bearing crudes. Trudy VNII NP no.7:86-96 '58.
(MIRA 12:10)

(Lubrication and lubricants--Testing)

S/081/62/000/005/080/112
B162/B101

11970
AUTHORS: Vinogradova, I. E., Petyakina, Ye. I., Shames, F. Ya.
TITLE: Antiseizing additives in oils for automobile gears and the
mechanism of their action
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 527-528,
abstract 5M212 (Sb. "Prisadki k maslam i toplivam".
M., Gostoptekhizdat, 1961, 214-223)

TEXT: An examination is made of the usual types of additives to lubricating
oils which reduce friction and wear, and the mechanism of their action.
Results are given and discussed of tests on a 4-ball friction machine (in
accordance with GOST 9490-60 (GOST 9490-60)) using solutions of 22 organic
compounds and some combinations of 2 of these compounds in DS-14 (DS-14)
oil. The compounds tested included alkyl xanthogenate derivatives
(including the additives -6/9 (LZ-6/9), -19 (LZ-19), and -23 (LZ-23)),
sulfured terpenes, chlorinated hydrocarbons, chloroalkyl phosphinic esters,
S-Cl-containing compounds, molybdenum blue (I), and S-P-containing compounds.

Card 1/2

L 007h0-66 EMT(m)/EPT(c)/T BN/DJ

ACCESSION NR: AP5021990

UR/0286/65/000/014/0065/0065
665.4/.5

AUTHOR: Garzanov, G. Ye.; Vinner, G. G.; Maloletkov, Ye. K.; Bogdanov, Sh. K.;
Sergiyenko, V. G.; Petyakina, Ye. I.; Selivanchik, Ya. V.; Vertlib, Ya. Ye.;
Gusman, M. Ye.; Shames, F. Ya.; Smirnov, M. I.; Granat, A. M.; Bulantseva, T. P.;
Krylova, T. A.

TITLE: A method for producing hydraulic fluid: Class 23, No. 172947

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 65

TOPIC TAGS: hydraulic fluid, petroleum product

ABSTRACT: This Author's Certificate introduces a method for producing hydraulic fluid based on petroleum products. The efficiency of the fluid at low temperatures is improved by using a velosite distillate with a flash point of 115-120°C and a viscosity of less than 2200 centistokes at -40°C.

ASSOCIATION: Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi (Scientific Research Institute for Organization, Mechanization and Technical Assistance)

Card 1/2

L 01805-67 EWT(m)/T DJ

ACC NR: AP6030592 (A/V) SOURCE CODE: UR/0413/66/000/016/0074/0074

INVENTOR: Garzanov, G. Ye.; Petyakina, Ye. I.; Bagryantseva, P. P.;
Shames, F. Ya.; Ravikovich, A. M.; Boshchevskiy, S. B.; Maloletkov, Ye. K.;
Selivanchik, Ya. V.; Gusman, M. Ye.; Skvirskiy, P. A.; Aver'yanov, V. A.;
Uzunkoyan, P. N.; Pisarchik, A. N.; Mikhaylov, Yu. A.; Belogradskiy, A. P.;
Bayevskiy, F. S.; Fomin, N. I.

ORG: none

TITLE: Method of obtaining a hydraulic lubricant. Class 23, No. 185000.
[Announced by the Scientific Research Institute for Organization, Mechanization,
and Technical Assistance to Construction (Nauchno-issledovatel'skiy institut
organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966,
74

TOPIC TAGS: lubricant, lubricant additive, antioxidant additive, polymethacrylate,
hydraulic lubricant

ABSTRACT: An Author Certificate has been issued for a method of obtaining a
hydraulic lubricant by means of additives with an oil base. To expand the operat-
Card 1/2 UDC: 621.892.8:621.226

TKALICH, S.M.; MINEYEV, I.K., glavnyy red.; RYABENKO, V.Ye., zam. glavnogo red.; TUMOL'SKIY, L.M., zam. glavnogo red.; KUR'YANOV, F.K., otv. zav vypusk; BASSOLITSYN, Ye.P., red.; BLINNIKOV, I.I., red.; DAUKSHO, Yu.Ye., red.; DZINKAS, Yu.K., red.; ZHARKOV, M.A., red.; ZAVALISHIN, M.A., red.; MANDEL'BAUM, M.M., red.; MATS, V.D., red.; MALETOV, P.I., red.; NOMOKONOVA, N., red.; NOSEK, A.F., red.; SERD, A.I., red.; SEMENYUK, V.D., red.; TAYEVSKIY, V.M., red.; TIKHONOV, V.L., red.; TROFIMUK, I.N., red.; TOMILOVSKAYA, M.V., red.; FOMIN, N.I., red.; SHAMES, P.I., red.; TROSHANIN, Ye.I., tekhn. red.

[Biogeochemical anomalies and their interpretation.] Biogeo-
khimicheskie anomalii i ikh interpretatsiia. Irkutsk, 1961.
39 p. (Materialy po geologii i poleznym iskopaemym Irkutskoi
oblasti no.3). (MIRA 17:1)

137-1957-12-24734 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 252 (USSR)

AUTHOR: Shames, S. I.

TITLE: The Development and the Principle of a Method of anodizing Aluminum Alloys Dispensing With the Use of a Tank
(Razrabotka i obosnovaniye bezvannogo metoda anodnogo passivirovaniya alyuminiyevykh splavov)

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Candidate of Technical Sciences, presented to the Kazansk. aviats. in-t (Kazan' Aviation Institute), Kazan', 1957.

ASSOCIATION: Kazansk. aviats, in-t (Kazan' Aviation Institute), Kazan'

1. Aluminum alloys-Corrosion prevention-Bibliography
2. Aluminum alloys-Anodizing-Bibliography

Card 1/1

52-6-29/54

AUTHOR: BOGOYAVLENSKIY, A.F., SHAMES, S.I.
 TITLE: Improved Construction of an Apparatus for Measuring the Elasticity of Anode Coatings. (Usovershenstvovaniye pribora dlya izmereniya elastichnosti anodnykh plenok, Russian)
 PERIODICAL: Zavodskaya Laboratoriya, 1957: Vol 23, Nr 6, pp 731-733 (U.S.S.R.)

ABSTRACT: As the protective properties of anode oxide coatings on aluminum and its alloys depend in a high degree on the elasticity of the coating, M.N.TYUKIN developed a method for the determination of this elasticity. It is judged according to the angle of the curvature of the sample which occurs at the moment of the first cracks that form on the coating. An apparatus - and elastometer - was constructed which was completed according to the last suggestions made by G.AKIMOV, N. TOMASHOV and M. TYUKINA, mainly by the fact that the aforementioned cracks on the anode coatings were recorded by means of a kinematic photocamera. Observations made showed that the elasticity found here represents a value which is inversely proportional to the angle of curvature on the occasion of the formation of cracks, and which is due mainly to the increase of the concentration of the electrolyte. An increase of the time of anodization reduces the elasticity of the coating. (With 4 Drawings and 3 References)

Card 1/2

137-58-4-7894

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 219 (USSR)

AUTHORS: Shames, S. J., Bogoyavlenskiy, A. F.

TITLE

The Tampon (Bathless) Method of Anodic Passivation of Aluminum Alloys. Development of a Tampon Passivation Procedure. Communications I and II [K voprosu o tamponovom (bezvannom) metode anodnogo passivirovaniya alyuminiyevykh splavov. Razrabotka rezhima tamponovogo passivirovaniya Soobshcheniye I i II]

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1957, Vol 37, pp 56-71

ABSTRACT:

A process for local anodizing (A) of the D16T Al alloy and the skin of the MIG-15 aircraft in H_2SO_4 solution is investigated. A tampon of heavy woolen felt cloth impregnated with the electrolyte is placed on the portion of the surface to be anodized. The cathode is a Pb electrode within the tampon. The time required for a drop of solution containing 25 cc 1.19 sp. gr. HCl, 3 g $K_2Cr_2O_7$, and 75 cc H_2O applied to the anodic coating (C) to turn green is the criterion of the corrosion resistance of the C. The effect of the duration of A, DA, and the strength of the electrolyte on the protective properties of the C were studied. By

Card 1/2

SHAMES, S.I.

Investigating the cohesiveness of oxide films during local
anodizing. Trudy KAI 52:93-98 '60. (MIRA 16:7)

(Oxidation, Electrolytic)

L 36097-66 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) JD/JXT(22)/WH/JH

ACC NR: AT6014325

SOURCE CODE: UR/2529/62/000/070/0022/0031

AUTHORS: Bogoyavlenskiy, A. F. (Doctor of chemical sciences, Professor); Shames, S. I.

ORG: none

TITLE: Preparation of enamel anodic oxidative coatings on aluminum and its alloys

SOURCE: ²⁷ Kazan. Aviatsionnyy institut. Trudy, no. 70, 1962. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation engineering and organization of production), 22-31

TOPIC TAGS: ^{anodization, enamel,} aluminum alloy, protective coating, anodic oxidation / AD-1 aluminum alloy, D16T aluminum alloy, AMtsM aluminum alloy, Ematal ^{protective coating}

ABSTRACT: Results of preparative and testing studies of anodic enamel type coatings on aluminum and its alloys are reported. The preparative process consists of two stages: 1) preliminary treatment of the metallic surface (degreasing), and 2) anodic oxidation in the presence of salts of titanium, thallium, and zirconium, which yields product covered with the "Ematal" coating. Kinetics of the process has been studied on alloys AD-1, D16T, and AMtsM at various temperatures and the protective indices of "Ematal" coatings have been determined. The "Ematal" coating is 30--50 times thinner and 3--10 times lighter than the usual paint and varnish coating. The "Ematal" coatings are highly resistant to corrosion and abrasion (see Fig. 1), are very elastic, and have poor electrical conductivity. It was shown that the pH of the electrolyte

Card 1/2

BOGOYAVLENSKIY, A.F.; SHAMES, S.I.

Obtaining enamel anode oxide films on aluminum and its alloys.
Trudy KAI no.70:22-31 '62. (MIRA 18:4)

ACCESSION NR: AT4043075

S/0000/64/000/000/0222/0232

AUTHOR: Shames, S. I.

TITLE: Anodizing of aluminum and its alloys

- SOURCE: Mezhdvuzovskaya konferentsiya po anodnoy zashchite metallov ot korrozii. 1st, Kazan, 1961. Anodnaya zashchita metallov (Anodic protection of metals); doklady* konferentsii. Moscow, Izd-vo Mashinostroyeniye, 1964, 222-232

TOPIC TAGS: aluminum AD-1, aluminum alloy AMtsM, duralumin DT-16, anodized aluminum, anodized aluminum alloy, anodic oxide film, mechanical property, dielectric strength, volume resistivity, corrosion resistance, oxalate anodizing bath, anodic film formation, aluminum corrosion

ABSTRACT: The report covers a study of film formation kinetics and the properties of anodic oxide films produced in an oxalic acid electrolyte with the titanium salt $\text{TiO}(\text{KC}_2\text{O}_4)_2 \cdot 2\text{H}_2\text{O}$ on aluminum AD-1 and Al alloys AMtsM and D16-T (unclad). Samples were wiped with benzine, chemically degreased (bath compositions given, 3 min., 60-70C for unpolished and 3-5 min., 70-80C for polished samples), hot and cold water rinsed, bleached (1-2 min., 40-50% HNO_3 , 18-20C), then anodized (bath composition given). The

Card 1/2

L 55987-65 EWT(d)/EWT(l)/EWT(m)/EWP(w)/EWP(i)/EWA(d)/EWP(v)/EPR/T/EWP(t)/EWP(k)/
EWP(h)/EWP(b)/EWP(l)/EWA(h) Pf-l/Ps-l/Peb IJP(c) JD
ACCESSION NR: AR5017261 UR/0276/65/000/006/B061/B061
621.358.8 52
B

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 6B561

AUTHOR: Shames, S. I.

TITLE: Investigation of the influence of ultrasound on the formation of thick anodic-oxide films on commercial aluminum alloys

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 111-117

TOPIC TAGS: ultrasound, aluminum alloy, anodization, cavitation, oxide formation/
GUZ 1.5N ultrasound generator 10

TRANSLATION: This article presents the results from investigations of the ultrasound influence on the kinetics of growth, hardness, toughness, and the resistance to electricity of films formed in the process of deep anodizing, developed at IFKh AN SSSR. A generator of type GUZ-1.5N served as a source of the ultrasound vibrations. It was established that at the frequency of 19.6 kilocycles ultrasound vibrations accelerate the oxide formation and increase its toughness and its resistance to electricity. Other factors being equal, the rate of thickness and

Card 1/2

L 55987-65

ACCESSION NR: AR5017261

toughness growth of the oxide increases greatly if the cavitation is suppressed by creating an excessive hydrostatic pressure in the oxidizing bath. 4 illustrations.
G. Darazhno

SUB CODE: IE, MM

ENCL: 00

Card 2/2 MB

L 14950-66 EWA(h)/EWP(z)/EWT(1)/EWT(m)/EWP(b)/EWA(d)/EWP(w)/EWP(t) /T
 ACC NR: AT6003157 MJW/JD/WB IJP(c) SOURCE CODE: UR/2525/64/000/084/0111/0117

AUTHOR: Shames, S. I.

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: Investigation of the influence of ultrasound on the formation of thick-layered anodic oxide films on industrial aluminum alloys

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 84, 1964. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation technology and production management), 111-117

TOPIC TAGS: metal, aluminum, aluminum alloy, anodic oxidation, ultrasonic field, ultrasonic irradiation, *ultrasonics, solid mechanical property, electric property*, AD1 aluminum alloy, D16T aluminum alloy

ABSTRACT: The influence of an ultrasonic field on the growth kinetics, hardness, durability, and electrical stability of anodic oxide films on the aluminum alloys AD1 and D16T was determined. The anode films were formed according to the method of N. D. Tomashev and M. N. Tyukina (Issledovaniya po korrozii metallov. No. 1, Trudy IFKh AN SSSR, vyp. 2, Izd-vo AN SSSR, 1951). A schematic of the experimental setup is shown, and the experimental results are presented graphically on Fig. 1. It was found that ultrasound at a frequency of 19.6 kc enhanced the growth of the oxide film and increased its abrasive and electrical stability, and that the growth rate and durability of the oxide film increased if cavitation was inhibited by creating a

Card 1/2

SHAMESOVA, L. G.

USSR/ Medicine - Bones, Marrow
Medicine - Metals, Toxicity

Feb 49

"Experimental Histological Study of the Reaction of the Bone Marrow of a Rabbit's Thigh to a Metallic Foreign Body," Ya. G. Dubrov, Sr Sci Collaborator, L. G. Shamesova, Jr Sci Collaborator, Inst of Surg, Acad Med Sci, Path Anat Inst Imeni Acad A. I. Abrikosov, Ord of Lenin Hosp Imeni S. P. Botkin, 7 pp

"Khirurgiya" No 2

PA 56/49T53

Results of subject study to determine: (1) how bone marrow reacts to a break caused by a nail, (2) what changes occur in bone-marrow tissue around the nail,

56/49T53

USSR/Medicine - Bones, Marrow (Contd)

Feb 49

(3) what occurs in the bone marrow after the nail is removed. Dir, Inst of Surg: M. N. Akhutin, Corr Mem, Acad Med Sci (deceased). Sci Dir, Path Anat Inst Imeni Acad A. I. Abrikosov: L. M. Shabad, Corr Mem, Acad Med Sci.

56/49T53

USSR/Medicine - Mononucleosis,
Infectious

Sep/Oct 49

"Angioseptic Form of Listerellosis," L. G. Shamesov,
Pathanat Inst Imeni Acad A. I. Abruksov, Clinical
Ord of Lenin Hosp Imeni S. P. Botkin, Cen Sci Res Inst
of Otolaryngol, Min of Publ Health RSFSR, 3 pp

"Arch Patol" XI, No 5

Listerellosis belongs to group of diseases known as
infectious mononucleosis and occurs in rodents, sheep,
swine, and at times in man, from eating meat of in-
fected animals. Although meningo-encephalitic form

157152

USSR/Medicine - Mononucleosis,
Infectious (Contd)

Sep/Oct 49

of disease is generally fatal, no record of angio-
septic form being so was found in literature. There-
fore, author discusses in considerable detail a case
of the latter which proved to be fatal. Includes
three photographs.

157152

SHAME

PRABSTING, V.N.; SHAMESOVA, L.G.

Lymphogranulomatosis with involvement of the mammary glands. Sov.
med. 20 no.12:55-57 D '56. (MLRA 10:1)

1. Iz khirurgicheskogo otdeleniya (zav. - prof. V.S.Rozanov) i
patologoanatomicheskogo otdeleniya (nauchnyy rukovoditel' - chlen-
korrespondent AMN SSSR prof. N.A.Krayevskiy) Moskovskoy gorodskoy
klinicheskoy ordena Lenina bol'nitsy imeni S.P.Botkina (glavnyy vrach-
prof. A.N.Shabanov)

(HODGKIN'S DISEASE
breast)

(BREAST NEOPLASMS
Hodgkin's dis.)

SHAMESOVA, L.G. (Moskva)

Primary amyloidosis with disseminated vascular lesions. Klin.med.
36 no.2:104-107 F '58. (MIRA 11:4)

1. Iz patologoanatomicheskogo otdeleniya (nauchnyy rukovoditel' -
chlen-korrespondent AMN SSSR prof. N.A.Krayevskiy) Klinicheskoy
ordena Lenina bol'nitsy imeni S.P.Botkina (glavnyy vrach - prof.
A.N.Shabanov)

(AMYLOIDOSIS, pathol.
vasc. disseminated lesions (Rus))
(BLOOD VESSELS, pathology,
in amyloidosis (Rus))

ZHISLINA, M.M., kand.med.nauk; SHAMESOVA, L.G., kand.med.nauk (Moskva)

Case of pulmonary coccidioidomycosis. Klin.med. no.12:92-95 '61.
(MIRA 15:9)

1. Iz 1-y kafedry rentgenologii i radiologii (zav. - zasluzhennyy
deyatel' nauki prof. S.A. Reynberg) i kafedry patologicheskoy
anatomii (zav. - prof. P.P. Yerofeyev) Tsentral'nogo instituta
usovershenstvovaniya vrachev.
(LUNGS--DISEASES) (COCCIDIOIDOSIS)

SHAMETKO, F.

"In advanced ranks of the fight for the development of
animal husbandry."

SO: Vet. 28 (5) 1951, p. 14

SHAMET'KO, Fedot Yefimovich; SIDEL'NIKOVA, Z., red.; NEMYTOV, V., tekhn.
red.

[Experts of precise checkrows] Mastera tochnykh kvadratov. Orel,
Orlovskoe knizhnoe izd-vo, 1960. 17 p. (MIRA 14:12)
(Agriculture)

137-58-5-9484

SHAMETS, YA. V.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 96 (USSR)

AUTHORS: Golubev, T.M., Khaykov, M.A., Sakharov, G.A., Danilov, L.I., Shamets, Ya.V., Korchemnyy, M.I.

TITLE: Reductions and Pressures Employed in Rolling on a Medium-gage Sheet Mill (Rezhim obzhatiy i usiliya pri prokatke na srednelistovom stane)

PERIODICAL: Sb. tr. Kuznetskogo mezhobl. pravl. Nauchno-tekhn. o-va chernoy metallurgii, 1956, Vol 1, pp 79-95

ABSTRACT: The results of an investigation of reduction (RE) schedules on a 2150 2-stand three-high Lauta mill with 850/560/850 mm rolls are presented. Analysis of the temperature of rolling (R) and the pressures and actual RE schedules in the R of 1150-1800 mm wide sheets of St. 3, St. 4, 65G, 1Kh18N9T and SKhL4 steels from slabs 80-220 mm wide established that actual R schedules do not reveal any differentiation in RE with width of sheet as envisaged in the technical instructions. Differentiation of actual RE in accordance with the grades of steel being rolled is observed to be correct. R of sheet of ShKh15 and 65G steels is done in accordance with the technical instructions, while Nrs 3 and 4

Card 1/2

137-58-5-9484

Reductions and Pressures Employed (cont.)

steels are rolled by more intensive and 1Kh18N9T and SKhL steels by less intensive regimes. When billets <20-30 mm thick are being R, it is necessary to maintain uniform RE and therefore to hold the maximum thickness of the work going into the second stand within these limits. It is suggested that analysis of rational RE regimes be performed in accordance with the equation: $\Delta h = 2P_r^2 D \cdot B_0^2 \cdot p^2$, where Δh is the absolute RE, B_0 is the thickness of the sheet in m, D is the mean rolling diameter of the rolls; p is the unit rolling pressure and P_r is the R stress permissible in terms of fatigue strength and housing service life. An example is presented of the calculation of an RE schedule in the R of 1Kh18N9T steel to a 6x1700-mm sheet.

M. Z.

1. Rolling mills--Performance

Card 2/2

SOV/137-58-9-18967

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 116 (USSR)

AUTHORS: Golubev, T.M., Chelyshev, N.A., Zaykov, M.A., Kaftanov,
M.P., Shamets, Ya.V.

TITLE: An Investigation of the Functioning of a Breakdown Mill (Issle-
dovaniye rezhima raboty obzhimnogo stana)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958,
Nr 2, pp 99-112

ABSTRACT: Steady-state conditions in the rolling (R) of blooms and slabs
of rail, killed, and certain quality steels are studied at the
blooming mill of the Kuznetsk Metallurgical Kombinat. The
readings of the mill dial were recorded for subsequent deter-
mination of the actual reduction per pass. Simultaneously, the
R conditions of each ingot were determined; namely, the num-
ber of passes in each groove and the number and sequence of
turnings. The functioning of the main motor of the mill was
recorded by a MPO-2 8-loop oscillograph. The roll-separating
pressure was measured by means of electrical inductive cap-
sules inserted beneath the lower bearings of the mill and pre-
calibrated on an 800-t hydraulic press. The capsule readings

Card 1/2

SHAMETS, Ya.V., inzh.; ZAYKOV, M.A., dotsent, kand.tekhn.nauk

Resistance to deformation in carbon steels under the effect of
high-speed hot rolling. Izv.vys.ucheb.zav.; Chern.met. 2
no.5:45-53 My '59. (MIRA 12:9)

1. Sibirskiy metallurgicheskiy institut. Rekomendovano kafedroy
obrabotki metallov davleniyem Sibirskogo metallurgicheskogo
instituta.
(Deformations (Mechanics)) (Rolling (Metalwork))

ZAYKOV, M.A., kand.tekhn.nauk dots.; SHAMETS, Ya.V., insh.; PERET'YAT'KO,
V.N., inzh.

Hardening curve in the hot rolling of steel. Izv.vys.ucheb.zav.;
chern.met. 2 no.9:73-82 S '59. (MIRA 13:4)

1. Sibirskiy metallurgicheskiy institut. Rekomendovano
kafedroy obrabotki metallov davleniyem Sibirskogo
metallurgicheskogo instituta.
(Rolling (Metalwork)) (Steel--Hardening)

ZAYKOV, M.A.; TSELUYKOV, V.S.; KAMINSKIY, D.M.; KUZNETSOV, A.F.;
BELINSKIY, Ye.D.; SHAMETS, Ya.V.; FEDOROV, N.A.; BARIYSKIY,
S.I.; ZAKHAROV, A.I.; ZHURAVLEV, M.A.; KOBYZEV, V.K.

Investigating energy and power parameters in plate rolling
on reversing mills. Izv. vys. ucheb. zav.; chern. met. 7
no.2:100-107 '64. (MIRA 17:3)

SHAMETS, Ya.V.

Temperature-velocity dependence of the resistance to deformation in carbon steels. Izv. vys. ucheb. zav.; chern. met. 7
no.2:112-117 '64. (MIRA 17:3)

1. Sibirskiy metallurgicheskiy institut.

SHAMETS, Ya. V.

Metal pressure on rolls in conditions of low and high areas
of deformation. lav. vys. ucheb. zav.; Chern. met. 7 no. 12:
59-64 '64 (NIRA 18:1)

L. Sibirskiy metallurgicheskiy institut.

GOIUBEV, T.M., doktor tekhn. nauk, prof.; CHELYSHEV, N.A., kand. tekhn.
nauk, dots.; ZAYKOV, M.A., kand. tekhn. nauk, dots.; KAFANOV, M.P.,
inzh.; SHAMETS, Ya.V., inzh.

Studying the operating conditions of a cogging mill. Izv. vys. ucheb.
zav.; chern.met. no.2:99-112 P '58. (MIRA 11:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling mills)

41470

S/142/62/005/004/007/010
E192/E582

7.4100

AUTHORS: Yanovskiy, M.S. and Shamfarov, Ya.L.

TITLE: Dynamic method of measuring the quality factor of resonators by using synchronous detection

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 5, no. 4, 1962, 515 - 518

TEXT: The method is based on the dynamic plotting of the frequency characteristic of the imaginary and the real components of the reflection coefficient of a resonator. It has the advantage of being based on measuring the spacing between clearly defined points (minima or zeros). The reflection coefficient for a resonator as a function of frequency (for frequency-deviations $\Delta\omega/\omega_0 \ll 1$) is expressed by:

$$\bar{r} = \frac{r_0 - j2Q_H \Delta\omega/\omega_0}{1 + j2Q_H \Delta\omega/\omega_0}$$

Card 1/4

S/142/62/005/004/007/010
E192/E382

Dynamic method

reflected from the investigated resonator. The real part of the reflection coefficient is expressed by:

$$\operatorname{Re} \bar{\Gamma} = \frac{\Gamma_o - (2Q_H \Delta \omega / \omega_o)^2}{1 + (2Q_H \Delta \omega / \omega_o)^2}$$

and this is equal to zero at:

$$2Q_H \Delta \omega_1 / \omega_o = \pm \sqrt{\Gamma_o}$$

so that the quality factor is defined by:

$$Q_H = \sqrt{\Gamma_o} \omega_o / 2 \Delta \omega_1$$

(3) .

Again, the real part of the reflection coefficient can be separated by using the synchronous detection method. There are 3 figures.

Card 3/4

S/109/52/007/003/029/029
D234/3302

4.0020 (1962, 301)
AUTHOR: Shamfarov, Ya.L.

TITLE: Analysis of the operation of a reflecting klystron under the conditions of regenerative amplification

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 3, 1962, 572 - 575

NOTE: The author states that the theoretical analysis of this problem can be simple if one introduces the notion of negative efficiency of an electronic beam

$$Q_e = \frac{2\pi f_0 W_0}{P_e} \quad (3)$$

where f_0 is the resonance frequency, P_e the power transmitted by the beam to the field during a period and W_0 the energy stored in the resonator of the klystron. An approximate formula, IX

Card 1/2

35205

S/109/62/007/005/006/021
D266/D307

7.4230

AUTHOR: Shamfarov, Ya.L.

TITLE: A method of measuring the phase velocity of slow waves

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 5, 1962,
812 - 815

TEXT: The author describes an experimental method for the above, using the Doppler frequency shift. The cyclotron resonance frequency in a variable electric field H is $f_c = eH/2\pi mc$ where e , m - charge and mass of an electron, c - velocity of light; H - magnetic field strength. If the electrons move with a velocity u it must be $f_c = f^0(1 + u/v) = eH/2\pi mc$ where f^0 - the cyclotron frequency in the coordinate system at rest and v the phase velocity of the travelling wave. Knowing the magnetic intensity and the beam voltage the phase velocity can be calculated. Δf^0 is determined by the transit time of the electrons through the slow wave structure (Ref. 1: Franklin M. Turner, Proc. IRE, 1960, 48, 5, 890) $\Delta f^0 = u/l$, where l is the length of the structure. Taking as an example $f^0 = 10^4$ Mc and $l =$
Card 1/2

38209
S/109/62/007/005/010/021
D266/D307

9.4220

AUTHOR: Shamfarov, Ya.L.

TITLE: Reflex klystron as UHF waveguide amplitude and phase modulator

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 5, 1962,
844 - 850

TEXT: If the coupling between the resonator of a reflex klystron and a waveguide is sufficiently large the oscillation can be cut off and the klystron works as an amplifier. Changing - under these conditions - the voltage on one of the electrodes (the repeller is the most suitable for this purpose) the gain can be influenced causing modulation of the output signal. Another possibility of modulation occurs when the beam presents a positive conductance and this conductance is dependent on repeller voltage. The author regards the modulation process as affecting the reflection coefficient and defines modulation as follows

$$m = |\Gamma_2| - |\Gamma_1| / |\Gamma_2| + |\Gamma_1| \quad (1)$$

Card (1/2)

S/181/63/005/004/010/047
B102/B186

AUTHORS: Shamfarov, Ya. L., and Smirnova, T. A.

TITLE: Investigation of spin-lattice relaxation in neutron-irradiated quartz

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1046 - 1049

TEXT: Two samples of natural monocrystalline quartz (disc, 9 mm diam, 2 mm height; parallelepiped, $3.4 \times 1.4 \text{ mm}^3$) were exposed to neutron irradiation ($3 \cdot 10^{18}$ and $3 \cdot 10^{19} \text{ n/cm}^2$) and then subjected to e.p.r. analysis. The first specimen showed intense lines with isotropic g-factor ($g \approx 2$) plus weak lines with anisotropic g-factor; the second had only one intense e.p.r. line with isotropic g-factor ($g \approx 2$). The spin concentrations of these crystals were respectively 10^{18} and 10^{19} cm^{-3} . The spin-lattice relaxation time T_1 was measured with the method of pulse inversion (Phys. Rev. 119, 953, 1960) at the frequency 9000 Mc/sec, and their time and temperature dependence was investigated in the range 1.7 - 4.2°K. The experimentally obtained relaxation curve can be described by $\exp(-t/T_1) = 1 - \Delta V(t)/\Delta V(\infty)$ where

Card 1/2